

King Fahd University of Petroleum and Minerals

Department of Mathematical Sciences

Syllabus of **Math 132 (061)**

(A. Umar/ Room 5-331/aumar@kfupm.edu.sa)

Course #: Math 132 , Title: Applied Calculus

Textbook: *Introductory Mathematical Analysis for Business, Economics, and the life and Social Sciences*, by Ernest F. Haeussler, Jr. & Richard S. Paul, 11th ed. (2005).

Week	Date	Section	Material	Homework
1	Sept. 09-14*	10.1	Limits	17,18,33,40,43
		10.2	Limits (cont'd)	2,15,36,42,52,57
		10.4	Continuity	5,11,24,32,37
2	Sept. 16-20	11.1	The Derivative	13, 14,17,26,27
		11.2	Rules for Differentiation	22,34,61,73,78,85
		11.3	The Derivative as a Rate of Change	8,12,16,20,27,39,41
Saturday, September 23 (National Holiday)				
3	Sept. 25-27	11.4	Differentiability and Continuity	
		11.5	Product and Quotient Rules	10,16,37,50,61,66
4	Sept. 30-Oct. 4	11.6	The Chain Rule and the Power Rule	8,18,44,46,62,69,72
		12.1	Derivatives of Logarithmic Functions	18,20,26,32,50
		12.2	Derivatives of Exponential Functions	16,26,30,38,39
5	Oct. 7-11	12.4	Implicit Differentiation	10,18,24,26,34
		12.5	Logarithmic Differentiation	8,12,19,21,26
		12.7	Higher Order Derivatives	2,14,30,34,37
Major Exam I, Suggested time: Oct. 9				
Eid Al-Fitr Vacation				
6	Oct. 28 Nov. 01	13.1	Relative Extrema	18,30,46,48,60
		13.2	Absolute Extrema on a Closed Interval	2,10,12
		13.3	Concavity	14,30,40,46,68
7	Nov. 4-8	13.4	The Second-Derivative Test	6,8,12
		13.5	Asymptotes	14,22,38,46
		13.6	Applied Maxima and Minima	2,14,18,22,26
8	Nov. 11-15	14.1	Differentials	12,18,22,28
		14.2	The Indefinite Integral	10,20,30,42,50
9	Nov. 18-22	14.3	Integration with Initial Conditions	6,8,10,12,14
		14.4	More Integration Formulas	9,15,35,53,70,75
		14.5	Techniques of Integration	6,18,30,44,48,55
10	Nov. 25-29	14.8	The Fundamental Theorem of Int. Calculus	16,32,36,44,48
		14.10	Area	9,15,20,24,34
		14.11	Area between Curves	1,5,12,30,30,32
Major Exam II, Suggested time: Nov. 27				
11	Dec. 2-6	15.1	Integration by parts	8,12,18,20,24,28,32
		15.3	Integration by Tables	8,12,30,36,49,54
12	Dec. 9-13	**	Derivatives and Integrals of Trig. Function	Handout
13	Dec. 16-20	17.1	Functions of Several Variables	2,5,12,16,23,28

Eid Al-Adha vacation				
14	Jan. 6-10	17.2	Partial Derivatives	6,18,20,28,34
		17.5	Higher Order Partial Derivatives	6,9,12,20,21
15	Jan-13-17	17.7	Maxima and Minima for funs. of Two Vars.	4,8,15,19,22,26,29

*Thursday, September 14, 2006: Normal Saturday classes.

- KFUPM attendance policy will be strictly enforced
- Suggested time for major exams:
 1. **First Major: Monday, October 9, 2006**
 2. **Second Major: Monday November 27, 2006**
- Final Exam is comprehensive and will be announced by the registrar.